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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,640	09/21/2006	Yuuki Kusumoto	8059-1009	4911
⁴⁶⁵ YOUNG & THOMPSON 209 Madison Street Suite 500 ALEXANDRIA, VA 22314			⁷⁵⁹⁰ EXAMINER NOLAN, PETER D	
			ART UNIT 3661	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/593,640

Applicant(s)

KUSUMOTO, YUUKI

Examiner

Peter D. Nolan

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 14-25 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date 9/21/2006
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement filed 9/21/2006 has been considered and placed of record in the file.

Drawings

1. On page 13, line 23 thru page 14, line 2 the disclosure states that the step 301 where the guidance information is acquired in advance is shown in figure 4. However, step 301 is not shown in figure 4.
2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) or an amendment to the specification are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance

Claim Objections

1. Claims 14, 18, 22 are objected to because of the following informalities:

2. **Regarding claims 14, 18, 22**, the phrase "a direction" in line 13 in claim 14, lines 11-12 in claim 18, and lines 13-14 in claim 22 should be corrected to "the direction" because the particular element was previously presented.
3. **Regarding claims 14, 18, 22**, the phrase "in which an object to be guided is located" in lines 15-16 in claim 14, lines 14-15 in claim 18, and lines 16-17 in claim 22 should be corrected to "in which an object to be guided to is located".

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14, 15, 18, 19, 22, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Millington '641 (US 6172641 B1) in view of Suzuki (US 5406492).
3. **Regarding claim 14**, Millington '641 teaches a navigation device provided with a three-dimensional surround system that includes a plurality of speakers (**see Millington '641 figures 1, 2 and column 2, line 47 thru column 3, line 14**), the navigation device installed in a moving object (**see Millington '641 figure 1 and column 2, lines 63-64**), comprising: an acquiring unit configured to acquire information on route guidance (**see Millington '641 figure 1, navigation components 34-40 and figure 2, Route Determination System 52. See also column 2, line 47 thru column 3, line 14 and column 3, lines 37-41**); and a control unit configured to control output of a guide sound so that a direction from which the guide sound is heard moves, based on the

information, using at least two speakers among the speakers (see **Millington '641 column 3, lines 6-24 and column 3, line 61 thru column 4, line 5**), wherein the guide sound includes a sound effect (see **Millington '641 column 3, lines 14-16**), the control unit is configured to control output of the sound effect so that a direction from which the sound effect is heard moves from substantially a front in a traveling direction of the moving object toward a direction in which an object to be guided is located (see **Millington '641 column 3, lines 6-24; column 3, line 61 thru column 4, line 5. While the example given in Millington '641 describes the sound effect moving from left rear speaker 60d to front right speaker 60a to create a "whooshing" sound towards the direction of a maneuver corresponding with the position of speaker 60a, it would be a mere design choice for the movement of the sound to move from the front to the direction of the maneuver**), and is configured to subsequently control output of a guide voice to be heard from substantially the direction in which the object is located (see **Millington '641 column 4, line 55 thru column 5, line 4**).

4. However, Millington does not explicitly teach where the guide sound includes a sound effect and a guide voice (see **Millington column 3, lines 14-16 where the audible maneuver could be a voice command or tones**).

5. Suzuki teaches where a navigation system controls output of a guide sound that includes a sound effect and a guide voice (see **Suzuki figure 1 and column 12, lines 43-50**).

6. It would be obvious to one skilled in the art to modify the system in Millington '641 so that the guide sound includes a sound effect and a guide voice because this can

attract the driver's attention to the voice navigation apparatus (**see Suzuki column 12, lines 43-50**).

7. **Regarding claim 15**, Millington '641, as modified by Suzuki in claim 14, teaches where the control unit is configured to control the output of the guide sound only for guidance on a branch point that is given before the moving object reaches the branch point (**see Millington '641 column 4, lines 40-42**).

8. **Regarding claim 18**, Millington '641 teaches a navigation method of guiding a route for a moving object using a three-dimensional surround system that includes a plurality of speakers (**see Millington '641 column 1, line 61 thru column 2, line 15**), the navigation method comprising: acquiring information on route guidance (**see Millington '641 column 2, line 47 thru column 3, line 14 and column 3, lines 37-41**); and controlling output of a guide sound so that a direction from which the guide sound is heard moves, based on the information, using at least two speakers among the speakers (**see Millington '641 column 3, lines 6-24 and column 3, line 61 thru column 4, line 5**), wherein the guide sound includes a sound effect (**see Millington '641 column 3, lines 14-16**) and the controlling includes controlling output of the sound effect so that a direction from which the sound effect is heard moves from substantially a front in a traveling direction of the moving object toward a direction in which an object to be guided is located (**see Millington '641 column 3, lines 6-24; column 3, line 61 thru column 4, line 5**). While the example given in Millington '641 describes the sound effect moving from left rear speaker 60d to front right speaker 60a to create a "whooshing" sound towards the direction of a maneuver corresponding

with the position of speaker 60a, it would be a mere design choice for the movement of the sound to move from the front to the direction of the maneuver), and controlling output of a guide voice to be heard from substantially the direction in which the object is located **(see Millington '641 column 4, line 55 thru column 5, line 4).**

9. However, Millington '641 does not teach where the guide sound includes a sound effect and a guide voice **(see Millington '641 column 3, lines 14-16 where the audible maneuver could be a voice command or tones).**

10. Suzuki teaches where a navigation method controls output of a guide sound that includes a sound effect and a guide voice **(see Suzuki figure 1 and column 12, lines 43-50).**

11. It would be obvious to one skilled in the art to modify the method in Millington '641 so that the guide sound includes a sound effect and a guide voice because this can attract the driver's attention to the voice navigation system **(see Suzuki column 12, lines 43-50).**

12. **Regarding claim 19,** Millington '641, as modified by Suzuki in claim 18, teaches where the controlling includes controlling the output of the guide sound only for guidance on a branch point that is given before the moving object reaches the branch point **(see Millington '641 column 4, lines 40-42).**

13. **Regarding claims 22 and 23:** Refer to the rejection of claims 18, 19 above. Claims 22 and 23 claim computer readable medium that stores a computer program for implementing the methods described in claim 18 and 19, respectively. As the method

steps are identical and Millington '641 and Suzuki each teach where the respective methods are computer executed (**see Millington '641 column 1, line 66 thru column 2, line 15; Suzuki column 5, lines 21-38**), claims 22 and 23 are rejected under the same rationales as claims 18 and 19, respectively.

14. Claims 16, 20, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Millington '322 (US 6363322 B1) in view of Fincham (US 2003/0219137 A1).

15. **Regarding claim 16**, Millington '322 teaches a navigation device provided with a three-dimensional surround system that includes a plurality of speakers (**see Millington '322 figure 2, navigation components 32-48 and speakers 60a-60d. See also column 3, lines 34-52 and column 4, lines 9-22**), the navigation device installed in a moving object (**see Millington figure 2**), comprising: an acquiring unit configured to acquire information on guidance (**see Millington figure 2, navigation components 34-40 and column 3, lines 34-65**); and a control unit configured to control output of a guide sound based on the information (**see Millington column 5, lines 22-26**)

16. However, while Millington '322 teaches where the control unit outputs a low-pitched sound and a non low-pitched sound (**see Millington column 5, lines 22-26 where an upcoming maneuver may be represented by a low tone and a high tone**) and where the sound system is a 3 dimensional sound system (**see Millington column 4, lines 9-22**), it does not explicitly teach where the control unit uses a low-pitched sound speaker and a speaker other than the low-pitched sound speaker among the speakers.

17. Fincham teaches where a vehicle sound system may contain a low-pitched sound speaker and a speaker other than the low-pitched sound speaker (**see Fincham paragraph 53. See also paragraph 57 where low frequencies may be directed to bass speakers or a subwoofer**).

18. It would be obvious to one skilled in the art to use the low-pitched and non low-pitched speakers in Fincham to output the low-tone and high-tone sounds, respectively, in Milligan because low-pitched speakers are better suited to outputting low-pitched sounds (**see Fincham paragraph 57**).

19. **Regarding claim 20**, Millington '322 teaches a navigation method of guiding a route for a moving object using a three-dimensional surround system that includes a plurality of speakers (**see Millington '322 column 1, line 66 thru column 2, line 35**), the navigation method comprising: acquiring information on route guidance (**see Millington '322 column 3, lines 34-65**); and controlling output of a guide sound based on the information (**see Millington column 5, lines 22-26**).

20. However, while Millington '322 teaches where the method includes outputting a low-pitched sound and a non low-pitched sound (**see Millington column 5, lines 22-26 where an upcoming maneuver may be represented by a low tone and a high tone**) it does not explicitly teach where controlling the output of the guide sound is performed using a low-pitched sound speaker and a speaker other than the low-pitched sound speaker.

21. Fincham teaches a method of outputting sounds using a low-pitched sound speaker and a speaker other than the low-pitched sound speaker (**see Fincham**

paragraph 53. See also paragraph 57 where low frequency sounds may be directed to bass speakers or a subwoofer)

22. It would be obvious to one skilled in the art to use the low-pitched and non low-pitched speakers in Fincham to output the low-tone and high-tone sounds, respectively, in Milligan '322 because low-pitched speakers are better suited to outputting low-pitched sounds (**see Fincham paragraph 57**).

23. **Regarding claim 24:** Refer to the rejection of claim 20 above. Claim 24 is a computer readable medium that stores a computer program for implementing the method described in claim 20. As the method steps are identical and Millington '322 and Fincham each teach where the respective methods are computer executed (**see Millington '322 column 3, lines 20-32; Fincham paragraph 127**), claim 24 is rejected under the same rationale as claim 20.

24. Claims 17, 21, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Millington '322 (US 6363322 B1) in view of Fincham (US 2003/0219137 A1) and further in view of Morimoto et al. (US 5938718).

25. **Regarding claim 17**, Millington '322, as modified by Fincham in claim 16, does not teach where the control unit is configured to control the output using the low-pitched sound speaker when the information includes information on an object for which attention should be called, the object located ahead in a traveling direction of the moving object.

26. Morimoto '322 teaches where a control unit of a navigation system is configured to output an audible warning when the guidance information includes information on an

object for which attention should be called, the object located ahead in a traveling direction of the moving object (**see Morimoto column 2, lines 25-35; column 7, lines 33-39; column 10, lines 50-55**).

27. It would be obvious to one skilled in the art to control the output of the low-pitched sound speaker in Millington '322, as modified by Fincham in claim 16, when the information includes information such as taught in Morimoto, because the information in Morimoto is precautionary data to warn a driver (**see Morimoto column 7, lines 35-40**). Outputting the data using the low pitched sound speaker, rather than another speaker, is a mere design choice.

28. **Regarding claim 21**, Millington '322, as modified by Fincham in claim 20, does not teach where the controlling includes controlling the output using the low-pitched sound speaker when the information includes information on an object for which attention should be called, the object located ahead in a traveling direction of the moving object.

29. Morimoto teaches a navigation method includes outputting an audible warning when the guidance information includes information on an object for which attention should be called, the object located ahead in a traveling direction of the moving object (**see Morimoto column 2, lines 25-35; column 7, lines 33-39; column 10, lines 50-55**)

30. It would be obvious to one skilled in the art to control the outputting of the low pitched sound speaker in Millington '322, as modified by Fincham in claim 16, when the information includes information as taught in Morimoto, because the information in

Morimoto is precautionary data of interest to a driver (**see Morimoto column 7, lines 35-40**). Outputting the data using the low pitched sound speaker, rather than another speaker, is a mere design choice.

31. **Regarding claim 25:** Refer to the rejection of claim 21 above. Claim 25 is a computer readable medium that stores a computer program for implementing the method described in claim 21. As the method steps are identical and Millington '322, Fincham and Morimoto each teach where the respective methods are computer executed (**see Millington '322 column 3, lines 20-32; Fincham paragraph 127; Morimoto column 6, lines 56-60**), claim 25 is rejected under the same rationale as claim 21.

References Cited

Ihi et al. (JP 2001-289660 abstract only) teaches where a navigation system outputs a guide sound and where the guide sound moves from the front of the vehicle in the traveling direction to a direction where an object to be guided to is located (**see Masaki abstract where the volumes of left and right speakers, LS and RS, are adjusted to move the direction from which the guide sound appears to be coming from point Y to points X or Z, depending on the direction to be taken by the vehicle**).

Conclusion

Any inquiry concerning this or any earlier communication from the examiner should be directed to Examiner Peter Nolan, whose telephone number is 571-270-7016. The examiner can normally be reached Monday-Friday from 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black, can be reached at 571-272-6956. The fax number for the organization to which this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Peter D Nolan/

Examiner, Art Unit 3661

2/11/2009

/Thomas G. Black/

Supervisory Patent Examiner, Art Unit 3661